DEVELOPING AN EDUCATIONAL PROGRAM IN VOCATIONAL AGRICULTURE FOR PART-TIME AND FULL-TIME FARMERS IN THE PANAMA SCHOOL AREA

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CHAPTER I

DESIGN OF STUDY

Introduction

This study is focused on farmers and ranchers living in the Panama School area, their needs, their goals, and the problems which they encounter. It is a study of the opportunities which are open through vocational agriculture evening classes in the Panama Vocational Agriculture Department classrooms. If these farmers' and ranchers' capabilities are enhanced, it will increase the number of choices available to them for successful establishment in farming and become a valuable asset to those already established in farming.

Recent years have seen a generally increasing interest in adult education. Many educators believe it is a responsibility of the public school institution to provide additional opportunities for farmers further to increase skills and abilities which make a more competent citizenry.

Mechanization of the modern farm, increasing importance of the purchasing and marketing aspect of the farm management business, consolidation of farm operation units, and conservation of the productive plant present additional reasons for adult education in vocational agriculture. Many of the increasing problems connected with these phases of farming are not applicable to the maturing student in the secondary programs of vocational agriculture, but are suddenly realized by the young and adult

farmers when they begin to operate the home farm or other farm business. The original legislation under which the vocational agriculture program was implemented, the Smith-Hughes Act, was intended to provide education and training for both present and prospective farmers.

In view of constant technological advances being made in agriculture, it is essential that American schools offer educational opportunities for young farmers and adult farmers to assist them in keeping abreast of those advances. Especially essential are technical courses of a specialized nature which will meet the needs of the farmers in a specific locality.

The Panama Vocational Agriculture Department attempts to serve some three hundred full-time and part-time farmers and ranchers in a service area of one hundred and fifty-nine square miles.

In the past most of the adult education work was done by on-the-farm instruction. The writer feels, with the technological explosion that is taking place in agriculture, that we must put forth a greater effort in providing organized group instruction at frequent intervals on major problems that the farmers and ranchers have and strive to find a solution to those problems.

Statement of the Problem

The problem was to determine the present farming status and major farm problems of the farmers and ranchers in the Panama School service area. A further aspect of the problem consisted of securing information to use in the development of a program of organized group instruction for the farmers and ranchers residing in the area served by the Panama Vocational Agriculture Department.

It is recognized that this study will help the writer decide more definitely what problems need more thorough analysis. These problems will be discussed in the regular educational programs, and plans will be made to try to solve them.

Methods of Procedure

For the purpose of this study, a farm survey and questionnaire were made to determine the farming status and the major farm problems confronting farmers and ranchers in the Panama service area.

The writer submitted the farm survey and questionnaire to the staff of the Department of Agriculture Education at Oklahoma State University. With recommendations from Dr. Robert R. Price and Professor Don M. Orr, they were approved.

A personal interview was conducted with thirty representative part-time and full-time farmers and ranchers in the Panama community in filling out the farm survey and questionnaires. This information was tabulated, conclusions were drawn, and an educational program in agriculture for the year was formulated. As each successive meeting was held, an analysis was made by the writer.

Ten meetings were held for group instruction during the year. The meetings were held in the vocational agriculture classroom.

The agriculture teachers used various means of securing attendance at these meetings. Personal invitations, telephone calls, newspaper articles, and radio announcements were all used to invite interested persons to participate.

CHAPTER II

REVIEW OF SELECTED LITERATURE

A review of selected literature was made to determine what research had previously been reported in connection with an educational program in agriculture for farmers. An additional purpose was to obtain information useful in the preparation of a schedule form. In reviewing previous research reports, it was found numerous volumes have been written on the subject. An attempt has been made to cite references representative of the literature available and pertaining to this research project. A selected number of these studies are reviewed briefly in this chapter.

A successful farmer must be a highly trained technician, a good mechanic, and a scientist well versed in the economical production of agricultural commodities. He needs to keep abreast of new developments in each field of agriculture in which he is engaged and to put into practice those developments or changes which will help him most.

The major objectives in working with adults in our vocational agriculture programs have been to develop to higher levels the abilities needed for increased proficiency in farming and improved farm living.

Deyoe[1] says the objectives of adult farmer classes include the development of effective abilities to

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[1] George P. Deyoe, Supervised Farming in Vocational Agriculture (Danville, Illinois, 1947), p. 440.

1. Increase the efficiency in producing and marketing farm products.

2. Increase the proficiency in managing the home farm.

3. Develop and improve practices related to the conservation of soil and other natural resources.

4. Participate in cooperative efforts and activities.

5. Improve the farming status of members.

6. Improve farm living and other aspects of the environment.

It is found that farmers vary greatly regarding their desires for assistance in connection with the objectives stated above and in their willingness to accept new ideas. The big problems in teaching farmers is getting new ideas and new information to them and getting the improved practices adopted.

A sub-committee of the North Central Rural Sociology Committee[2] has made a number of studies to determine how farm people accept new ideas. According to these educators and sociologists, there can be identified five distinct stages in the process of adoption of new ideas and practices.

1.	Awareness	The individual learns of the existence of the idea or practice.
2.	Interest	At this stage the individual develops an interest in the idea and seeks information about it.
3.	Evaluation	The individual mentally weights the merits of the practice in terms of his own circumstances.
4.	Trial	The individual applies the idea or practice on a small scale.

[2]Herbert F. Lionberger, "Adoption of New Ideas and Practices; A Report of the National Project in Agricultural Communications." Iowa State Press, 1960; pp. 28, 29.

5. Adoption — He accepts the practice and puts it into operation on his farm.

The teacher of vocational agriculture must not lose sight of the fact that members of adult farmer classes are experienced farmers who have definite responsibilities and who take pride in their achievements. This means that the teacher must become acquainted with the farming programs of class members, that his instruction must be practical and related to their farming experiences, and that he must use every device at his command to motivate his instruction if he is to bring about the realization of his objectives. Lymon Bryson states:

> "The very simple notion of getting an education and then going out into the world to use it no longer suffices. Learning becomes a necessary element in the life process, continuing as long as life itself continues. The conscious organization of adult education, that is, the provisions of opportunities for continuing intellectual development, has become not merely desirable but necessary. Modern civilization cannot be given over to new generations of children and safely intrusted to them if they continue to work only with what they can learn in their first intense educational experience."[3]

Even if it were possible for youths to absorb as much knowledge as they might need in adulthood, it is impossible for them to foresee all the problems they will face in later life. Our society is in a constant state of change, and new knowledge is ever needed to meet the changing conditions.

Today's successful farmer must always be ready to learn new methods of doing a job. As pointed out by Phipps[4] farmers are often highly motivated by economic conditions. They have jobs to do at home and will

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[3] Lymon Bryson, Adult Education (Chicago, Illinois, 1936), p. 6.

[4] Lloyd J. Phipps, Successful Practice in Adult Education (Danville, Illinois, 1954), p. 45.

weight the expected value of farm meetings against other activities.

Crabtree,[5] in an attempt to plan for a successful adult education program in a local rural community, found that farmers are quite interested in attending farm meetings and that meetings should be carefully planned so that interest and needs of the farmers are maintained. They should be organized in such a manner as to give primary consideration to problems that are seasonable and timely.

Cheatham,[6] in a similar study, points out that there will always be a need for adult farmers to attend classes as long as the instructor stays ahead of the farmers and has something to offer that will improve the farmer's economic situation.

As a basis for planning an effective program for a department of vocational agriculture, the agriculture teacher responsible for the program must orient himself to the needs, trends, resources, and other conditions of farming and farm living in the community served by the department. These "facts of life" differ considerably from community to community.

Deyoe[7] states some of the information that the agriculture teacher should be concerned with in planning a program:

1. Types of patterns of farming, tenure of farm operators, and methods of becoming established in farming.

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[5]Francis Lowell Crabtree, "Developing an Adult Education Program in Agriculture for the Clayton Community" (unpub. Master's report, Oklahoma State University, 1958), p. 55.

[6]Carl G. Cheatham, "Developing an Adult Education Program in Agriculture for the Talihina Community" (unpub. Master's report, Oklahoma State University, 1961), p. 8.

[7]George P. Deyoe, "Community Inventory and Understanding," The Agriculture Education Magazine, December 1957, p. 124.

2. Important enterprises on the farms in the community.

3. Levels of efficiency attained in these enterprises.

4. Factors associated with successful farming in the community.

5. General conditions related to farming and farm living in the community, such as soil resources, markets for agricultural products, levels of living, social mores and values held by the people, levels of education, and off-farm work.

6. Trends in farming and farm living and factors affecting these changes.

The writer believes that each adult farmer should be guided and challenged in such a way as to lead him to analyze further his own needs or problems and to formulate objectives or purposes acceptable to him. He also should be encouraged to work toward higher levels of production efficiency.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

Data presented in this chapter were obtained by a survey and questionnaire of thirty representative farmers and ranchers residing in the Panama School area who may enroll in young farmer and adult farmer classes.

The primary objective of this study was to secure information on the present farming status and major farm problems of most concern to the farmers and ranchers.

The writer feels that the information received from the farmers would be a good criteria by which to evaluate present farming conditions in the Panama School area.

The areas surveyed by the writer were: (1) Farming Status; (2) Animal Enterprises; (3) Farm Mechanics; (4) Pasture Management; (5) Disease Problems; (6) Farm Management.

The data are presented in tabular form in order to facilitate comparison and analysis.

It is interesting to note in data presented in Table I that 40 per cent of the full-time farmers in this survey were between 41 and 45 years of age and 40 per cent of the part-time farmers were between 56 and 60 years of age. The difference is attributable to the older farmers' supplementing their incomes with off-the-farm employment in order to qualify for higher Social Security benefits at age 65. With

the older farmers retiring from the farm, more land will be available to younger farmers.

TABLE I

AGE OF THE THIRTY FARMERS IN THIS STUDY

	Farmers Reporting			
	Full-time		Part-time	
Age	Number	Per Cent	Number	Per Cent
20-25	0	0	1	6 2/3
26-30	1	6 2/3	0	0
31-35	0	0	2	13 1/3
36-40	2	13 1/3	0	0
41-45	6	40	2	13 1/3
46-50	2	13 1/3	2	13 1/3
51-55	2	13 1/3	1	6 2/3
56-60	1	6 2/3	6	40
61-65	1	6 2/3	1	6 2/3
Totals:	15	100	15	100

A study of the information secured and presented in Table II reveals 86-2/3 per cent of the full-time farmers had from 0 to 3 children at home when this survey was made. The table shows 66-2/3 per cent of the part-time farmers also had 0 to 3 children at home.

None of the full-time farmers had as many as 6 to 9 children at home, but 13-1/3 per cent of the part-time farmers reported that number at home. Two of the part-time farmers reported offspring who did most of the farm labor at home, allowing the head of the household to work at jobs off the farm to supplement family income.

TABLE II

NUMBER OF CHILDREN FARMERS REPORTED AT HOME

Number of Children	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
0-1	2	13 1/3	5	33 1/3
2-3	11	73 1/3	5	33 1/3
4-5	2	13 1/3	3	20
6-7	0	0	1	6 2/3
8-9	0	0	1	6 2/3
Totals:	15	100	15	100

Data presented in Table III show 40 per cent of the full-time and 40 per cent of the part-time workers reporting stayed in school from the fourth to eighth grades. Seven full-time farmers terminated their formal education between the ninth and twelfth grades. Two full-time farmers completed from two to four years of college as did four of the part-time farmers.

It is evident that the part-time farmers, possessing a greater number of years of formal education, have a wider job selection in off-the-farm employment.

TABLE III

HIGHEST GRADE COMPLETED BY FARMERS IN REPORT

Grade	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
4th-8th Grade	6	40	6	40
9th-12th Grade	7	46 2/3	5	33 1/3
2-4 College	2	13 1/3	4	26 2/3
Totals:	15	100	15	100

A total of 26-2/3 per cent of the full-time farmers reported farms containing from 321 to 640 acres of land (See Table IV), or enough to earn a livelihood. Five part-time farmers reported farms of 80 to 160 acres. This is not enough land to make a living, so they must work part-time off the farm to sustain themselves and their families. The three full-time farmers who reported less than 80 acres were turkey producers with yearly incomes of $7,000.00 to $32,000.00.

TABLE IV

SIZE OF FARM AS REPORTED BY THIRTY FARMERS IN REPORT

	Farmers Reporting			
	Full-time		Part-time	
Acres	Number	Per Cent	Number	Per Cent
Less than 80	3	20	2	13 1/3
80-160	1	6 2/3	5	33 1/3
161-320	2	13 1/3	3	20
321-640	4	26 2/3	4	26 2/3
640-1,000	2	13 1/3	1	6 2/3
More than 1,000	3	20	0	0
Totals:	15	100	15	100

Data presented in Table V show that five of the full-time farmers had between 11 and 15 years of farming experience. Seven of the part-time farmers had completed between 5 and 10 years of farming experience. Only 3 of the full-time farmers had between 21 and 30 years of farming experience, whereas there were 6 part-time farmers who had between 21 and 30 years of farming experience.

Those same 6 farmers a few years ago were full-time farmers, but at the present time are supplementing their incomes by off-the-farm employment for Social Security purposes.

TABLE V

YEARS OF FARMING EXPERIENCE OF FARMERS IN REPORT

	Farmers Reporting			
	Full-time		Part-time	
Years	Number	Per Cent	Number	Per Cent
5-10	3	20	7	46 2/3
11-15	5	33 1/3	1	6 2/3
16-20	4	26 2/3	1	6 2/3
21-25	3	20	3	20
26-30	0		3	20
Totals:	15	100	15	100

Data presented in Table VI reveal that 46-2/3 per cent of the farmers have been on the same farm from five to ten years, and 66-2/3 per cent of the part-time farmers have been on the same farm from five to ten years.

There were no full-time farmers reporting being on the same farm from between 26 to 30 years. One part-time farmer has been on the same farm from 26 to 30 years. The tenure of the farm operators are stable and are not likely to change to any great extent.

TABLE VI

TENURE OF FARMERS ON PRESENT FARM EACH OPERATES

	Farmers Reporting			
	Full-time		Part-time	
Years	Number	Per Cent	Number	Per Cent
5-10	7	46 2/3	10	66 2/3
11-15	4	26 2/3	1	6 2/3
16-20	3	20	3	20
21-25	1	6 2/3	0	0
26-30	0	0	1	6 2/3
Totals:	15	100	15	100

TABLE VII

FARMERS WHO PLAN TO EXPAND, CONTINUE OR DISCONTINUE OPERATIONS

	Farmers Reporting			
	Full-time		Part-time	
Operations	Number	Per Cent	Number	Per Cent
Expand	12	80	11	73 1/3
Continue	3	20	0	
Discontinue	0		4	26 2/3
Totals:	15	100	15	100

Data presented in Table VII reveal present plans the 30 farmers surveyed have made regarding future farming activities. Eighty per cent of the full-time farmers plan to expand operations, and one of them plans to discontinue the business of farming. It was found that 73-1/3 per cent of the part-time farmers have a desire to expand operations, and 26 2/3 per cent want to discontinue operations. Since both part-time farmers and full-time farmers definitely indicate a desire to expand operations, land will likely continue to be very much in demand, and consequently prices are likely to continue to rise.

TABLE VIII

INVESTMENTS FARMERS HAVE IN LAND

	Farmers Reporting			
Capital	Full-time		Part-time	
Investments	Number	Per Cent	Number	Per Cent
Under $10,000.00	3	20	6	40
$10,000.00-$25,000.00	4	26 2/3	7	46 2/3
$25,000.00-$50,000.00	4	26 2/3	2	13 1/3
$50,000.00-$100,000.00	2	13 1/3	0	0
Over $100,000.00	2	13 1/3	0	0
Totals:	15	100	15	100

Findings summarized in Table VIII indicate the amount of capital farmers have invested in land. Of the full-time farmers, eight have between $10,000.00 and $50,000.00 invested; while nine part-time farmers have investments of between $10,000.00 and $50,000.00. There are no part-time farmers with an investment of more than $40,000.00 among the respondents included in the report. Two full-time farmers have investments in land exceeding $100,000.00.

TABLE IX

INVESTMENTS FARMERS HAVE IN IMPROVEMENTS

Capital Investments	Farmers Reporting Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
Under $5,000.00	1	6 2/3	3	20
$5,000.00-$15,000.00	9	60	12	80
$16,000.00-$25,000.00	4	26 2/3	0	0
Over $25,000.00	1	6 2/3	0	0
Totals:	15	100	15	100

Data presented in Table IX reveal that 6-2/3 per cent of the full-time and 20 per cent of the part-time farmers have improvements with a total value under $5,000.00, while 60 per cent of the full-time farmers and 80 per cent of the part-time farmers have investments in improvements of between $5,000.00 and $15,000.00. Only one full-time farmer reported more than $25,000.00 invested in improvements.

The area of farming investments and their relationship to anticipated returns is one which the writer feels time should be spent in adult classes. Prominent in study and discussion should be a consideration of grades of building materials and costs of various kinds and types of buildings.

TABLE X

INVESTMENTS FARMERS HAVE IN LIVESTOCK

Capital Investments	Farmers Reporting			
	Full-time		Part-time	
	Number	Per Cent	Number	Per Cent
Under $5,000.00	0	0	6	40
$5,000.00-$15,000.00	6	40	7	46 2/3
$15,000.00-$30,000.00	7	46 2/3	2	13 1/3
$30,000.00-$60,000.00	1	6 2/3	0	0
Over $60,000.00	1	6 2/3	0	0
Totals:	15	100	15	100

As indicated in Table X, 40 per cent of the part-time farmers have a total capital investment in livestock under $5,000.00. These six farmers do not have enough capital invested in livestock to justify full-time farming, and they do not have enough land to readily provide for expansion of operations. Data presented in the table also show that 46 2/3 per cent of the full-time farmers have investments that range from $15,000.00 to $30,000.00 in livestock. One full-time farmer had more than $60,000.00 invested in livestock.

No part-time farmer reported investments in livestock exceeding $30,000.00. The two part-time farmers who reported investments of between $15,000.00 and $30,000.00 are both businessmen and are probably presently expanding their farming operations, largely as a result of non-farm profits.

TABLE XI

FARMERS' PREFERENCE OF MEETING TIMES FOR GROUP INSTRUCTIONS

	Farmers Reporting			
	Full-time		Part-time	
Day	Number	Per Cent	Number	Per Cent
Monday	7	46 2/3	10	66 2/3
Tuesday	2	13 1/3	1	6 2/3
Wednesday	0	0	0	0
Thursday	4	26 2/3	3	20
Friday	2	13 1/3	1	6 2/3
Totals:	15	100	15	100

Findings summarized in Table XI indicate 46-2/3 per cent of the full-time farmers and 66-2/3 per cent of the part-time farmers prefer to meet on Monday night for group instruction. A majority of both full-time and part-time farmers reported they preferred Monday night for group instruction, so this is the time adult farmer classes will be held in the Vocational Agriculture Building.

TABLE XII

ANIMAL ENTERPRISES REPORTED ON THE THIRTY FARMS OF THE STUDY

	Farmers Reporting			
	Full-time		Part-time	
Enterprise	Number	Per Cent	Number	Per Cent
Beef Cattle	12	80	15	100
Dairy	2	13 1/3	0	0
Swine	3	20	4	26 2/3
Horses	8	53 1/3	4	26 2/3
Poultry	4	26 2/3	1	6 2/3

A study of the information from which Table XII was compiled reveals that 12 of the full-time farmers have beef cattle on their farms. Fifteen of the part-time farmers indicated they have beef cattle.

Beef cattle on the part-time farmers' property took fewer number of man-hours to care for, giving the farmers more time to work off the farm.

Two of the full-time farmers were dairymen; no part-time farmers reported owning dairy cattle. Eight of the full-time and four of the part-time farmers have horses on their farms. They are used for handling cattle. Four of the full-time farmers reported poultry along with one part-time farmer. Beef cattle, horses, swine, poultry and dairy will be considered in selecting enterprises for class study.

Findings summarized in Table XIII indicates 13 full-time farmers own 1,555 head of beef cattle, whereas 15 part-time farmers own only 700 head. Two full-time farmers own 107 head of dairy animals. Part-time farmers reported none. Three of the full-time farmers reported six head of swine and four part-time farmers reported owning 158 head. The part-time farmers using self-feeders and self-waters require fewer man-hours to manage swine. Four of the full-time farmers had 49,135 head of turkeys and one part-time farmer had 200 laying hens.

The data reveal that the beef enterprise is predominate in this area, but turkey production, swine, and dairy have possibilities of becoming more important.

TABLE XIII

TOTAL NUMBER OF FARM ANIMALS BY TYPE OWNED BY THE THIRTY FARMERS IN THIS STUDY

	Farmers Reporting			
	Full-time		Part-time	
Enterprise	No. of Head on Farms	Farmers	No. of Head on Farms	Farmers
Beef	1,555	12	700	15
Dairy	107	2	0	0
Swine	6	3	158	4
Horses	24	8	12	4
Poultry	49,135	4	200	1

Facts furnished by respondents and compiled in Table XIV illustrate the kinds and number of farm machines owned by the farmers in this report. Thirteen of the full-time farmers own 20 tractors, whereas ten part-time farmers own ten tractors. Tractor maintenance could be one of the subjects taught in the adult farmer class.

Other machinery ranking in importance includes hay balers, mowers, rakes, brush-hogs, fertilizer disks, and power sprayers.

Very little row crop farming is done in this school district, therefore the machinery possessed by farmers would be machinery that could be of use in grassland farming.

TABLE XIV

KIND OF EQUIPMENT THE THIRTY FARMERS HAVE ON FARMS

Enterprise	Farmers Reporting: Full-time Total Number Machines	Full-time Number of Farmers	Part-time Total Number Machines	Part-time Number of Farmers
Tractors	20	13	10	10
Hay Balers	7	7	5	5
Mowers	13	10	6	6
Rakes	10	7	5	4
Brush-hogs	17	11	10	9
Power Sprayers	4	4	5	5
Fertilizers	8	8	5	5
Disks	13	10	9	9
No Machines	0	2	0	5

Data presented in Table XV shows that 73-1/3 per cent of the full-time farmers and 86-2/3 per cent of the part-time farmers are interested in attending a farm machinery repair course. The four full-time and two part-time farmers who were not interested in such a course did not have any machinery on their farms.

TABLE XV

DISTRIBUTION OF FARMERS IN TERMS OF INTEREST IN A FARM MACHINERY AND REPAIR COURSE

Reply	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
Yes	11	73 1/3	13	86 2/3
No	4	26 2/3	2	13 1/3
Totals:	15	100	15	100

It is interesting to note the kind and amount of pasture the farmers reported (See Table XVI). It was revealed that 11 full-time farmers have 3,889 acres of native grass, whereas 12 part-time farmers have 1,127 acres. Of woodland pastures, ten full-time farmers reported 1,450 acres, and nine part-time farmers had 410 acres.

TABLE XVI

KIND OF PASTURE AND ACRES OF THE THIRTY FARMERS IN THIS STUDY

Kind of Pasture	Farmers Reporting			
	Full-time		Part-time	
	Total Acres	Number	Total Acres	Number
Native	3,889	11	1,127	12
Woodland	1,450	10	410	9
Tame	2,460	10	1,820	15
Legume	1,609	12	560	8
Temporary	81	2	0	0
Farmers Reporting None	0	2	0	0

Ten full-time farmers had 2,460 acres in tame pastures; 15 part-time farmers reported 1,820 acres. Twelve full-time farmers had 1,609 acres in legume pastures and eight part-time farmers had 560 acres.

Pastures will be one of the major problem areas of study in the adult farmer classes.

In data presented in Table XVII it is evident that 60 per cent of the full-time farmers prefer Greenfield Bermuda grass. Greenfield Bermuda is adapted to this area and produced excellent forage under proper grassland management. This is an area that could be discussed in an adult class.

TABLE XVII

KIND OF BERMUDA GRASS PREFERRED BY THE THIRTY FARMERS IN THIS REPORT

	Farmers Reporting			
	Full-time		Part-time	
Kind	Number	Per Cent	Number	Per Cent
Common	9	60	15	100
NK-37	1	6 2/3		
Midland	0			
Greenfield	3	20		
Farmers Not Reporting	2	13 1/3		
Totals:	15	100	15	100

According to Table XVIII, ten full-time and ten part-time farmers practice rotation grazing. Three full-time farmers use the practice of continuous grazing; five of the part-time farmers employ continuous grazing. The above practices should receive major attention in the adult education program.

TABLE XVIII

DISTRIBUTION OF GRAZING PRACTICED BY THE THIRTY FARMERS

	Farmers Reporting			
	Full-time		Part-time	
Type	Number	Per Cent	Number	Per Cent
Continuous	3	20	5	33 1/3
Rotation	10	66 2/3	10	66 2/3
Not Reporting	2	13 1/3	0	0
Totals:	15	100	15	100

It is significant that eight part-time farmers did not report a winter pasture program. Four of the full-time farmers reported no winter pasture, since they were broiler and turkey farmers. This is a

problem area that will be discussed in the adult farmer classes. Rye, oats, and vetch are the most popular plants used by both full-time and part-time farmers for winter pastures. (See Table XIX)

TABLE XIX

PLANTS USED FOR WINTER PASTURE AS REPORTED BY THIRTY FARMERS IN STUDY

	Plants Used					
	Ryegrass	Rye	Vetch	Wheat	Oats	Not Reporting
Full-time	4	11	5	3	7	4
Part-time	3	7	5	0	0	8

Data as presented in Table XX indicate that the highest percentage of weed control in pastures by both full-time and part-time farmers is accomplished by use of the brush-hog. Six of the part-time farmers reported they did not control weeds in pastures. Two of the full-time farmers reported no control.

Control of weeds in pastures is important for top quality pasture production. This will be discussed in the adult farmer classes.

TABLE XX

METHODS USED TO CONTROL WEEDS IN PASTURES

	Farmers Reporting			
	Full-time		Part-time	
Method	Number	Per Cent	Number	Per Cent
Brush-hog	11	73 1/5	9	60
Spraying	1	6 2/3	0	0
Mowing	1	6 1/3	0	0
No Control	2	13 1/5	6	40
Totals:	15	100	15	100

Findings summarized in Table XXI show that 100 per cent of the part-time farmers are interested in pasture improvement as compared to 86-2/3 per cent of the full-time farmers. Two full-time farmers not reporting are turkey producers.

Pasture improvement will be discussed in the adult farmer classes.

TABLE XXI

INTEREST OF FARMERS IN PASTURE IMPROVEMENTS

	Farmers Reporting			
	Full-time		Part-time	
Reply	Number	Per Cent	Number	Per Cent
Yes	13	86 2/3	15	100
No	0	0		
Not Reporting	2	13 1/3		
Totals:	15	100	15	100

Data presented in Table XXII indicate that 86-2/3 per cent of the full-time farmers would have a soil test before applying fertilizer. Sixty per cent of the part-time farmers did not test soil before applying fertilizers. Of the 30 farmers in the survey, 11 would not test the soil to see what fertilizer is needed.

Testing soils will be discussed in the adult farmer class.

TABLE XXII

OPINIONS EXPRESSED BY THIRTY FARMERS ON TESTING SOIL BEFORE APPLYING FERTILIZERS

	Farmers Reporting			
	Full-time		Part-time	
Soil Test	Number	Per Cent	Number	Per Cent
Yes	13	86 2/3	6	40
No	2	13 1/3	9	60
Totals:	15	100	15	100

Data compiled for Table XXIII reveal that five full-time farmers and 11 part-time farmers applied no fertilizer on their pastures. Seven of the full-time farmers and three of the part-time farmers applied 10-20-10 fertilizer on their pastures.

Three of the full-time and six of the part-time farmers reporting no fertilizers applied on pastures did, however, use fertilizer the year previous to this study.

TABLE XXIII

KINDS OF FERTILIZERS APPLIED ON PASTURES

	Farmers Reporting			
	Full-time		Part-time	
Fertilizers	Number	Per Cent	Number	Per Cent
None	5	33 1/3	11	73 1/3
10-20-10	7	46 2/3	3	20
Barnyard Manure	0	0	1	6 2/3
12-12-12	2	13 1/3	0	0
Nitrate	1	6 2/3	0	0
Totals	15	100	15	100

Data presented in Table XXIV show eight of the full-time farmers own a total of 93 purebred cows, nine of the part-time farmers own a total of 144 purebred cows. Both full-time and part-time farmers owned a total of 92 purebred hereford cows and 145 purebred angus cows. There were 53 more purebred angus cows than hereford cows.

TABLE XXIV

PERCENTAGE OF BEEF COWS THAT ARE PUREBRED REPORTED ON THE THIRTY FARMS IN THIS STUDY

	Farmers Reporting					
	Full-time			Part-time		
Breed	Number Farmers	Total Number Cows	Per Cent	Number Farmers	Total Number Cows	Per Cent
Hereford	5	18	33 1/3	7	74	46 2/3
Angus	3	75	20	2	70	13 1/3
Shorthorn	0	0	0	0	0	0
Mixed	0	0	0	0	0	0

Findings summarized in Table XXV show that eleven full-time farmers own a total of 2,128 grade cows, 1,688 of these are herefords, 170 are angus, and 270 are mixed with other breeds. The part-time farmers own a total of 443 grade cows, 287 are herefords, 14 are shorthorn, and 142 are of mixed breeds. Both the full-time and the part-time farmers had a total of 1,875 grade hereford cows.

TABLE XXV

PERCENTAGE OF BEEF COWS THAT ARE GRADE AS REPORTED ON THE THIRTY FARMS IN THIS STUDY

	Farmers Reporting					
	Full-time			Part-time		
Breed	Number Farmers	Total Number Cows	Per Cent	Number Farmers	Total Number Cows	Per Cent
Hereford	5	1688	33 1/3	7	287	46 2/3
Angus	3	170	20	0	0	0
Shorthorn	0	0	0	1	14	6 2/3
Mixed	3	270	20	5	142	33 1/3

TABLE XXVI

PERCENTAGE OF BULLS THAT ARE PUREBRED AS REPORTED BY THE THIRTY FARMERS IN THIS STUDY

	Farmers Reporting					
	Full-time			Part-time		
Breed	Number Farmers	Total Number Cows	Per Cent	Number Farmers	Total Number Cows	Per Cent
Hereford	6	27	40	9	16	60
Angus	3	11	20	4	5	26 2/3
Shorthorn	0	0	0	1	1	6 2/3
Charlay	2	9	26 2/3	0	0	0
None	4	0	26 2/3	1	0	6 2/3

Findings summarized in Table XXVI show, six full-time farmers own 27 purebred hereford bulls. Nine part-time farmers own 16 purebred hereford bulls. Three full-time farmers own 11 purebred angus bulls and four part-time farmers own five purebred angus bulls. Two full-time farmers reported owning nine purebred charlay bulls.

TABLE XXVII

AGE HEIFERS ARE BRED

Range in Months	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
14-15	3	20	2	13 1/3
16-17	3	20	2	13 1/3
18-19	1	6 2/3	2	13 1/3
20-21	1	6 2/3	1	6 2/3
22-23	0		0	
24-25	5	33 1/3	8	53 1/3
Not Reporting	2	13 1/3	0	
Totals:	15	100	15	100

Data presented in Table XXVII reveal nine full-time farmers have heifers bred after 17 months of age with the highest per cent being in the 24- to 25-month range. Eight of the part-time farmers indicated they bred their heifers after two years of age.

In a personal interview conducted with both full-time and part-time farmers, the interviewees indicated they had fewer calving problems when they bred after two years of age.

Findings summarized in Table XXVIII show that 40 per cent of the full-time farmers and 53-1/3 per cent of the part-time farmers have cows calving in the fall. Twenty per cent of full-time farmers and 20 per cent of part-time farmers' cows calve year round.

None of the full-time farmers in this study indicated cows calving in the spring, and only two part-time farmers made such indications.

In the opinion of the writer that 20 per cent of both the part-time and full-time farmers' cows calve year round. In the community as a whole the percentage would be higher than the scope of this report reveals.

TABLE XXVIII

SEASON OF THE YEAR COWS CALVE AS REPORTED BY THE THIRTY FARMERS IN STUDY

	Farmers Reporting			
	Full-time		Part-time	
Season	Number	Per cent	Number	Per cent
Spring March, April, May	0		2	13 1/3
Summer June, July, August	0		0	
Fall September, October, November	6	40	8	53 1/3
Winter December, January, February	3	20	2	13 1/3
Year Round	3	20	3	20
Not Reporting	3	20	0	
Totals:	15	100	15	100

According to Table XXIX eight full-time farmers have between 71 and 80 per cent of their calf crop raised. Forty-six and two-thirds per cent of the part-time farmers have between 71 and 80 per cent of their crop raised. Four of the full-time farmers who have large operations reported 81 to 90 per cent of their calf crop raised. Four of the part-time farmers reported 81 to 90 per cent of their calf crop raised. No farmers in the study reported over 90 per cent of his calf crop raised.

TABLE XXIX

DISTRIBUTION OF FARMERS IN TERMS OF PERCENTAGE OF CALF CROP RAISED

Per Cent Range	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
60-70	1	6 2/3	4	26 2/3
71-80	8	53 1/3	7	46 2/3
81-90	4	26 2/3	4	26 2/3
91-100	0		0	
Not Reporting	2	13 1/3	0	
Totals	15	100	15	100

TABLE XXX

METHODS OF BREEDING CATTLE REPORTED BY PRODUCERS

Method	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
Artificial Breeding	1	6 2/3	0	
Control Breeding	7	46 2/3	9	60
Bulls with Cows all year	5	33 1/3	6	40
Not Reporting	2	13 1/3	0	
Totals:	15	100	15	100

Data presented in Table XXX show only one full-time farmer breeding his cows by artificial insemination. This farmer is a dairyman.

Seven of the full-time and nine of the part-time farmers practice control breeding. They turn the bulls into the pastures with the cows for two and one-half to three months then the bulls are put in a different pasture.

Five of the full-time and six of the part-time farmers practice

the method of running bulls with cows year round. A greater number of the farmers in the community use this practice.

TABLE XXXI

AGE CALVES ARE CASTRATED

Age Range Days	Farmers Reporting Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
7-15	1	6 2/3	0	
16-30	6	40	0	
31-45	3	20	5	33 1/3
46-60	3	20	10	66 2/3
Not Reporting	2	13 1/3	0	
Totals:	15	100	15	100

It is significant (See Table XXXI) that 46-2/3 per cent of the full-time farmers castrate their bull calves from 7 to 45 days of age. Thirty-three and one-third per cent of the part-time farmers castrate bull calves between 31 and 45 days of age.

Twenty per cent of the full-time farmers castrate between 46 and 60 days of age, and 66-2/3 per cent of the part-time farmers castrate between 46 and 60 days of age.

TABLE XXXII

AGE CALVES ARE VACCINATED FOR BLACKLEG

	Farmers Reporting			
	Full-time		Part-time	
Age in Days	Number	Per Cent	Number	Per Cent
1-30	3	20	4	26 2/3
31-60	6	40	8	53 1/3
61-90	3	20	2	13 1/3
91-120	1	6 2/3	0	0
Reporting None	2	13 1/3	1	6 2/3
Totals:	15	100	15	100

As indicated in Table XXXII, 40 per cent of the full-time and 53-1/3 per cent of the part-time farmers vaccinate calves between one and two months of age.

Vaccinating at an early age is good calf management practice. Only one full-time farmer vaccinated after three months of age. Most farmers in this area vaccinate at an early age because of the labor problem and the handling of calves.

TABLE XXXIII

TIME OF YEAR CALVES ARE MARKETED

	Farmers Reporting			
	Full-time		Part-time	
Months	Number	Per Cent	Number	Per Cent
January, February, March	0	0	0	0
April, May, June	6	40	9	60
July, August, September	5	33 1/3	1	6 2/3
October, November, December	1	6 2/3	5	33 1/3
Reporting None	3	20	0	0
Totals:	15	100	15	100

Data presented in Table XXXIII indicate 40 per cent of the full-time farmers are marketing their calves in April, May, and June, whereas 60 per cent of the part-time farmers are selling their calves at the same time.

Thirty-three and one-third per cent of the full-time farmers are marketing calves in July, August, and September, and 33-1/3 per cent of the part-time farmers are marketing their calves in October, November, and December.

More of the farmers in this area are feeding calves for slaughter. In the past they sold them to feeders.

TABLE XXXIV

AGE CALVES ARE MARKETED

	Farmers Reporting			
	Full-time		Part-time	
Months	Number	Per Cent	Number	Per Cent
1-4	0	0	0	0
5-8	7	46 2/3	9	60
9-12	4	26 2/3	6	40
13-24	1	6 2/3	0	0
Reporting None	3	20	0	0
Totals:	15	100	15	100

Findings summarized in Table XXXIV presents evidence that 46-2/3 per cent of the full-time farmers market their calves when they are between five and eight months of age. Sixty per cent of the part-time farmers market their calves between five and eight months of age. The full-time and part-time farmers in this group are farmers who employ control breeding practices. They have about eight months time to market the calves when the market price is at its peak.

TABLE XXXV

MARKET WEIGHT OF BEEF CALVES REPORTED

Weight in Pounds	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
400-500	3	20	4	26 2/3
501-600	9	60	10	66 2/3
601-700	0	0	1	6 2/3
Reporting None	3	20	0	0
Totals:	15	100	15	100

Data presented in Table XXXV indicate that 60 per cent of the full-time farmers' market weight of calves is between 501 and 600 pounds. Sixty-six and two-thirds per cent of the part-time farmers report their calves to weigh 501-600 pounds. The farmers practice controlled breeding. They are marketing their cattle at eight months of age when they weigh 501-600 pounds. In the Panama area, this is a slaughter class.

TABLE XXXVI

PROBLEMS FARMERS HAVE WITH CATTLE DISEASES AND PARASITES

Diseases and Parasites	Farmers Reporting: Full-time Number	Full-time Per Cent	Part-time Number	Part-time Per Cent
Blackleg	2	13 1/3	3	20
Bangs	2	13 1/3	2	13 1/3
Foot Rot	11	73 1/3	11	73 1/3
Shipping Fever	1	6 2/3	0	0
Milk Fever	2	13 1/3	0	0
Mastitis	2	13 1/3	1	6 2/3
Anaplasmosis	11	86 2/3	15	100
Pinkeye	8	53 1/3	7	46 2/3
Pneumonia	8	53 1/3	13	86 2/3
Scours	11	73 1/3	11	73 1/3
Parasites	6	40	10	66 2/3
Others	0	0		
Reporting None	2	13 1/3		

The information in Table XXXVI is significant in that it shows anaplasmosis to be the major disease of beef cattle in the Panama area, both in number of farmers reporting and number of animals involved. Foot rot, pneumonia, scours, and parasite control are the major problems with diseases. The diseases above will be discussed in adult farmer classes.

Data presented in Table XXXVII indicate the full-time farmers reported no swine in the survey. Five part-time farmers reported problems with the swine disease cholera. The parasites worms, lice, and mange were reported by part-time farmers as problems.

The above diseases and parasites will be discussed in the adult farmer classes.

TABLE XXXVII

PROBLEMS FARMERS HAVE WITH SWINE DISEASE AND PARASITES

Diseases and Parasites	Farmers Reporting			
	Full-time		Part-time	
	Number	Per Cent	Number	Per Cent
Cholera	0	0	5	33 1/3
Erysipelas	0	0	1	6 2/3
Pneumonia	0	0	3	20
Mange	0	0	4	26 2/3
Lice	0	0	4	26 2/3
Worms	0	0	5	33 1/3
Reporting None	15	100	10	66 2/3

Data presented in Table XXXVIII reveal that two full-time farmers have problems with poultry diseases and parasites. One part-time farmer has a problem with lice.

The diseases and parasites of poultry will be discussed in adult farm classes.

TABLE XXXVIII

PROBLEMS FARMERS HAVE WITH POULTRY DISEASES AND PARASITES

Diseases and Parasites	Farmers Reporting			
	Full-time		Part-time	
	Number	Per Cent	Number	Per Cent
Newcastle	0	0	0	0
Fowlpox	2	13 1/3	0	0
Pullorium	2	13 1/3	0	0
Coccidiosis	2	13 1/3	0	0
Worms	2	13 1/3	0	0
Lice	2	13 1/3	1	6 2/3
Reporting None	13	86 2/3	14	93 1/3

Findings as reported in Table XXXIV show the major problems of the full-time farmers in farm management are: financing, credit, interest rates, income tax, farm records, leasing and rental agreements, and Social Security.

It is significant that more of the part-time farmers reported problems in farm management. Seven of the part-time farmers reported Social Security problems, whereas only four of the full-time farmers indicated such problems.

Farm management is a major problem to be discussed by the adult farm classes.

TABLE XXXIV

PROBLEMS FARMERS HAVE WITH FARM MANAGEMENT

Problems	Farmers Reporting			
	Full-time		Part-time	
	Number	Per Cent	Number	Per Cent
Financing a farm	8	53 1/3	10	66 2/3
Sources of credit	8	53 1/3	10	66 2/3
Interest rates	8	53 1/3	9	60
State and Federal Income Tax	10	66 2/3	12	80
Keeping farm records	11	73 1/3	12	80
Leasing and rental agreements	6	40	9	60
Social Security	4	26 2/3	7	46 2/3
Insurance	2	13 1/3	1	6 2/3
Reporting None	3	20	2	13 1/3

Findings summarized in Table XL indicate 80 per cent of both full-time and part-time farmers reported no problems in home food supply.

The full-time farmers reported food preservation, vegetables, small fruit, and butchering livestock as problems. The part-time farmers reported vegetables, small fruit, and butchering livestock as problems with which they were most concerned.

TABLE XL

PROBLEMS FARMERS HAVE WITH HOME FOOD SUPPLY

Problems	Farmers Reporting			
	Full-time		Part-time	
	Number	Per Cent	Number	Per Cent
Small fruit	1	6 2/3	2	13 1/3
Vegetables	2	13 1/3	3	20
Food Preservation	3	20	0	0
Butchering Livestock	1	6 2/3	2	13 1/3
Reporting None	12	80	12	80

Data presented in Table XLI show that 93-1/3 per cent of the full-time farmers understand the functions of certain governmental agencies. Only one full-time farmer did not understand the Farmers Home Administration program.

The part-time farmers did not understand the FHA, REA, ASC, and SCS programs.

A representative from the various governmental agencies will discuss his agency's program and the service it offers farmers in the adult farm classes.

TABLE XLI

FARMERS NOT UNDERSTANDING GOVERNMENTAL AGENCIES

	Farmers Reporting			
	Full-time		Part-time	
Agencies	Number	Per Cent	Number	Per Cent
SCS	0	0	6	40
ASC	0	0	6	40
REA	0	0	4	26 2/3
FHA	1	6 2/3	7	46 2/3
Reporting None	14	93 1/3	8	53 1/3

CHAPTER IV

A YEAR'S PROGRAM OF ADULT EDUCATION FOR FARMERS OF THE PANAMA AREA

The first of a series of ten meetings for farmers was held in the Panama High School Vocational Agriculture Building. Subject selected for the first meeting was animal diseases, emphasizing anaplasmosis of cattle. The time of the meeting was 7:00 o'clock in the evening, and 32 farmers attended.

From July to November each year livestock producers are faced with the possibility of losing several head of cattle from this dreaded disease. Farmers in this report alone have lost up to 20 head of cattle in one season, and during one season 56 head died of the disease in the Panama area.

There is only one veterinarian in the county, and it is impossible for him to treat a season's usual number of cases; therefore, farmers and ranchers call on the Vocational Agriculture Department for help.

The writer feels that the farmers could do more to prevent the disease as well as to treat the animals, and the vocational agriculture instructor arranged for Dr. Montgomery, a veterinarian of Poteau, Oklahoma, to speak at the first meeting.

Dr. Montgomery told the group about what causes the disease, how it spreads, prevention by spraying, mixing aureomycin in feed, how to recognize early symptoms, and medications applicable.

The author feels that the first meeting was very successful. The farmers realized that by coming together and discussing their problems much could be gained.

It was also observed that farmers were doing more to help prevent this disease by spraying and mixing aureomycin in feed. Five of the farmers present at the meeting vaccinated their cattle with liquamycin. Only seven cases of anaplasmosis were reported in the community last season, and only one stricken animal died.

CLASS MEETING NUMBER TWO

Farmers and ranchers in the Panama area have a problem each year controlling external and internal parasites.

At the first meeting farmers expressed interest in a class on external and internal parasites, so it was announced there would be a second meeting in the Vocational Agriculture Building. Persons attending the first meeting were asked to inform others in the community about the meeting.

The vocational agriculture instructor was in charge of the meeting. A copy of the bulletin "Beef Cattle Parasite Control" (Circular No. 387) was given each farmer. A set of slides was shown to identify the various kinds of parasites, and each one was explained as to life cycle, breeding habits, and control.

Several farmers in the group were able to identify correctly the parasites shown. Some had seen the parasites before, but did not know their correct names.

Also discussed were various types and kinds of chemical materials used to control both external and internal parasites.

As one result of the meeting, the writer observed that both full-time and part-time farmers adopted a better parasite control program. They were using the chemical materials adapted to the control of parasites. They sprayed and wormed their cattle more often, resulting in more parasites controlled and a greater financial savings.

CLASS MEETING NUMBER THREE

Objective: To improve pastures in the Panama area.

Procedure: It was announced that a class on pasture improvement would be held at the Panama Vocational Agriculture Building at a designated time. Twenty-five farmers were present.

The vocational agriculture instructor was in charge of the meeting. Discussed were fall and winter pastures and the approved adapted varieties of small grain and legumes for this area. Also discussed were seed bed preparation, planting date, seeding rate, fertilizer treatment, grazing period, per cent protein, and approximate carrying capacity of various grass and legume combinations.

The vocational agriculture instructor had made previous arrangements to have four farmers present who had outstanding pasture improvement programs. They were introduced and asked to tell the group how they went about establishing improved pastures.

Numerous questions were asked which prompted much discussion and culminating in a very successful meeting. The four farmers invited the other farmers to visit their farms, and several farmers accepted the invitations.

Results of the Meeting: The farmers were given information and evidence of improved pastures. They were given the cost of pasture

improvement as well as the savings obtainable through such a program.

Some of the farmers were not aware of the fact year round grazing in this area is possible.

Twenty farmers in the area planned to improve their pastures; they planned to plant approved varieties adapted to this area.

CLASS MEETING NUMBER FOUR

Objective: To acquaint farmers and ranchers in the Panama service area with the work of the LeFlore County Soil Conservation District and the help it offers area residents.

Procedure: Arrangements for the date and time of the meeting were made with Mr. Lemuel Ball, work unit conservationist. Postal cards were mailed to farmers announcing the meeting and asking them to invite others. The meeting was held at the Panama High School Auditorium with 26 farmers and ranchers present.

Mr. Ball explained how the Soil Conservation Service could benefit farmers in this school district. He presented soil conservation plans of six of the leading farmers and ranchers in the area. The group was very much impressed by the plans, especially when Mr. Ball showed aerial photographs of some of the farms where the plans were in effect. In each field the soil was classified as to type and class, and recommendations were made for each area of the various farms as to which plants were best suited for planting in order to reap the most benefits.

Mr. Ball also explained how the farmers could become SCS Co-operators. The group also was told of the uses of District equipment which is available for small rental fees.

He discussed improved Bermuda grass varieties adapted to this area,

sprigging rate, cost of root stock, and seed bed preparation.

Results of the Meeting: The farmers were given information about the Soil Conservation Service. Fifteen of the farmers present made plans to become Co-operators.

Ten of the farmers made plans to plant an approved variety of Bermuda grass.

Four of the farmers planned to construct farm ponds.

The Panama Future Farmers of America Chapter made plans to plant a test plot of three acres, devoting one acre each to Coastal, Midland, and Greenfield with the root stock furnished by the LeFlore County Soil Conservation Service. Farmers were invited to visit the plot to see results of the test.

CLASS MEETING NUMBER FIVE

Objective: To improve the feeding of livestock in the Panama area.

Procedure: The writer mailed postal cards to farmers in the community area informing them that a meeting would be held at the Vocational Agriculture Building. Twenty-one farmers attended.

The author contacted Mr. Don Thompson, a representative of the Nutrena Feed Company, Fort Smith, Arkansas, as a resource person. Mr. Thompson passed out pamphlets on the winter feeding of cattle. He told the group the protein requirement for a given animal and then showed how much feed would be required for the animal to receive the necessary amount of protein.

He asked the farmers how many had calving difficulties during the late winter and early spring months, and used calving problems as examples why it is important that cows be given necessary protein and

mineral in their rations.

Several farmers present had calving trouble, and they recognized that their present poor feeding operations were eventually costing them.

Mr. Thompson brought a variety of feeds with him and discussed each one.

Results of the Meeting: Some farmers in the group realized at the meeting that by giving an animal necessary requirements of protein and minerals, more financial savings were available than their present feeding operations--in some cases hay--afforded. After the animal is stricken with a nutritional disease, it is usually too late to start feeding the necessary protein and minerals, the farmers realized.

The vocational agriculture instructor observed through personal visits with the farmers that they had improved their feeding programs, and as a result had less calving and disease problems.

CLASS MEETING NUMBER SIX

Objective: To assist farmers with the filing of their income tax returns.

Several farmers in the area do not keep a written record of income and expenses. After January 1, many farmers visit the Vocational Agriculture Department to ask what they can deduct on Federal and State income tax returns.

Procedure: The writer met with Mr. Jackson, an Internal Revenue Service representative, at Poteau, Oklahoma. Mr. Jackson agreed to meet with the farmers and explain to them the forms that should be filed.

Personal contact and postal cards were used to announce the meeting, and 12 farmers attended.

Mr. Jackson explained the forms to the group, using forms completed by farmers as examples. He gave each person a form to complete as he explained each item.

The farmers asked many questions concerning Federal and State income taxes.

One of the things Mr. Jackson emphasized to the farmers was the necessity of keeping complete records of income and expenses. As the farmers were completing the forms, they further recognized the importance of a farm record.

Results of the Meeting: After the meeting many farmers asked where they could obtain a farm record book in order to begin keeping records of their expenditures.

More farmers in the area are keeping records of their farming activities.

CLASS MEETING NUMBER SEVEN

Objective: To learn more about control and prevention of animal diseases.

A great number of animals are lost each year in the Panama area through livestock diseases. Some of the more prevalent diseases are blackleg, Bangs, foot rot, shipping fever, milk fever, pneumonia, mastitis, scours, pinkeye, and bloat. The diseases represent a great loss to area farmers each year.

Procedure: A meeting date was set and farmers informed of the meeting by personal contact and by postal cards. Sixteen farmers attended the meeting at the Vocational Agriculture Building.

The author led a discussion about the most prevalent animal diseases in the county. Also discussed were the cause, the prevention, and the treatment of the particular diseases. A chart showing where various kinds of injections are administered was exhibited.

Results of the Meeting: Some of the farmers in the group had never given an injection of medicine before. Those farmers were observed administering injections to some of the animals on their own farms. The writer also observed that some had purchased vaccination syringes and interveinous injection sets to be used by the farmers themselves.

CLASS MEETING NUMBER EIGHT

Objective: To inform farmers and ranchers in the Panama community about the work of the Agricultural Conservation Program.

Procedure: The speaker was Mr. Emerson Adams who is in charge of the local Agricultural Conservation Program office. Postal cards were sent to farmers in the area and some were contacted personally. Announcements also were made over radio station KLCO at Poteau, Oklahoma, giving the date, time, and place of the meeting. There were 29 farmers attending.

Mr. Adams discussed the purpose of the ACP, how County ACP funds are set, and who is responsible for the business of the County ACP.

He told the farmers they were eligible to use the Agricultural Conservation Program on their farms for cost-sharing. He also told them the maximum rate for cost-sharing on various practices.

The group asked numerous questions concerning the program, particularly on the cost-sharing plan.

Results of the Meeting: Farmers in the Panama community are more

informed as to how the ACP can benefit them. As a result of this meeting, more farmers are receiving cost-sharing benefits of the program.

CLASS MEETING NUMBER NINE

Objective: To inform the farmers in the Panama community on the control of brush and trees.

Procedure: The writer again contacted Mr. Lemual Ball of the Soil Conservation Service who agreed to speak. A meeting date was set and farmers were sent postal cards to announce the session. Fifteen responded by attending the meeting.

Mr. Ball showed the group numerous photographs of areas in the county where farmers had controlled brush and trees by various methods.

He first discussed the control method of using a bulldozer to clear brush and trees. A farmer in the group who had cleared 40 acres on his farm answered many questions as to cost of control and farm management operation after control.

The next method he discussed was spraying timber by airplane, including the cost of spraying per acre, length of control, and approximate kill that could be expected. Several acres in this area had been sprayed.

Mr. Ball showed the group a tree gun that could be used to control trees and brush. He also told the group that if a farmer sprays by airplane on smaller acreage, a tree gun can be used to kill trees not affected from the air. He told the farmers how to mix chemicals and how to fill and use the gun. He also told them the approximate cost per acre.

Results of the Meeting: Seven of the farmers at the meeting cleared

a total of 350 acres by using a bulldozer; 160 acres were sprayed by helicopter.

CLASS MEETING NUMBER TEN

Objective: To visit farmers in the area who have pasture improvement programs, farmers who cleared land by bulldozer, and farmers who had sprayed by helicopter.

Procedure: The agriculture instructor notified the farmers in the community of the planned field trip via postal cards and personal contact. Twenty-one farmers were present for the meeting and field trip.

The agriculture instructor had made arrangements with owners of the farms to be visited. Transportation was available.

Four farmers with outstanding pasture improvement programs were visited. Each farmer told the group how he established the pasture, how much it had cost, and its approximate yield. Some of the farmers had sprigged Bermuda grass roots. They planted midland, Greenfield NK-37, and a field common Bermuda grass. The various varieties were discussed and the group agreed that Greenfield Bermuda grass seemed to thrive best in this area.

Results of the Field Trip: The farmers realized that pasture improvement is a must if they are to stay in the business of livestock farming. It was difficult for some of the farmers in the group to believe that three acres could produce enough forage for a cow and a calf.

The farmers also realized that the price of land in this area has tripled in the last seven years. They saw evidence that it is less expensive to improve what pasture they have than to buy more land.

All the farmers on the field trip gave evidence that they were going to employ some pasture improvement measures on their farms, starting by having land cleared either by bulldozer or helicopter.

It is the opinion of this writer that the field trip method of instruction is one of the best in obtaining results from an adult farmer meeting.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

This study was undertaken for the purpose of securing information on the present farming status and the major farm problems of most concern to the farmers and ranchers residing in the Panama School District area in order to improve the adult educational program in agriculture.

The findings can be summarized as follows:

1. Forty per cent of the full-time farmers in this report were between 41 and 45 years of age. Forty per cent of the part-time farmers were between 56 and 60 years of age.

2. Eleven of the full-time farmers reported two to three children at home. Three of the part-time farmers reported four to five children at home.

3. Two of the full-time farmers completed between two and four years of college. Four of the part-time farmers completed between two and four years of college.

4. Twenty-six and two-thirds per cent of the full-time farmers reported farming between 321 to 640 acres. Five part-time farmers reported farms of 80 to 160 acres.

5. Twenty per cent of the full-time farmers have between 21 and 25 years of farming experience. Twenty per cent of the part-time farmers have between 26 and 30 years of farming experience.

6. Seven full-time farmers reported living on the same farm between five and ten years. Ten part-time farmers reported living on the same farm between five and ten years.

7. Eighty per cent of the full-time and 73-1/3 per cent of the part-time farmers plan to expand their farming operations.

8. The full-time farmers have more capital invested in land than the part-time farmers.

9. Full-time farmers have capital investments between $5,000.00 and more than $25,000.00 in improvements. Fifteen of the part-time farmers have between $5,000.00 and $15,000.00 invested in improvements.

10. Fifteen of the full-time farmers reported $5,000.00 to more than $6,000.00 invested in livestock. Fifteen of the part-time farmers reported $5,000.00 to $30,000.00 invested in livestock.

11. The full-time and part-time farmers preferred Monday night for group instruction.

12. Eighty per cent of the full-time farmers reported owning 1,555 head of cattle and 100 per cent of the part-time farmers reported owning 700 head of beef cattle.

13. Thirteen of the full-time farmers reported owning 20 tractors. Ten part-time farmers reported owning ten tractors.

14. Both full-time and part-time farmers were interested in attending a farm machinery and repair course.

15. Sixty per cent of the full-time farmers preferred common Bermuda grass.

16. Sixty-six and two-thirds per cent of the full-time and part-time farmers practice rotation grazing of pastures.

17. Rye, oats, and vetch are the most popular plants used for winter pasture by both full-time and part-time farmers. Eight of the part-time farmers do not plant a winter pasture.

18. Eleven full-time and nine part-time farmers use a brush-hog to control weeds in pasture.

19. Eighty-six and two-thirds per cent of the full-time and 100 per cent of the part-time farmers are interested in pasture improvements.

20. Thirteen of the full-time farmers have their soil tested. Nine of the part-time farmers do not have their soil tested before applying fertilizer.

21. Five full-time and 11 part-time farmers applied no fertilizers to their pastures.

22. Five full-time farmers own a total of 18 purebred Hereford cows. Seven part-time farmers own a total of 74 purebred cows.

23. Six full-time farmers own a total of 27 purebred Hereford bulls, and 11 purebred Angus bulls. Nine part-time farmers own a total of 16 purebred Hereford bulls and five purebred Angus bulls.

24. Eight full-time farmers reported heifers were bred between 14 and 21 months.

25. Forty per cent of the full-time farmers and 53-1/3 per cent of the part-time farmers' cows calve in the fall.

26. Eight full-time and seven part-time farmers reported between 71 to 80 per cent of their calf crop raised.

27. Seven full-time and nine part-time farmers reported the practice of control breeding of cows.

28. Six full-time farmers castrated calves between 16 and 30 days of age. Ten part-time farmers castrated calves when they were 46 to 60 days old.

29. Forty per cent of the full-time and 53-1/3 per cent of the part-time farmers vaccinate calves for blackleg when they are 31 to 60 days of age.

30. Forty per cent of the full-time and 60 per cent of the part-time farmers market calves in April, May, and June.

31. Six of the full-time and nine of the part-time farmers market their calves during April, May, and June. Prices for slaughter calves are highest during this time of the year.

32. Forty-six and two-thirds per cent of the full-time and 60 per cent of the part-time farmers market calves between five and eight months of age.

33. Sixty per cent of the full-time and 66-2/3 per cent of the part-time farmers report calves weigh between 500 and 600 pounds.

34. Cattle diseases that farmers were most concerned with were anaplasmosis, foot rot, pneumonia, pinkeye, and scours.

35. Swine diseases most common were cholera, pneumonia, mange, lice, and worms.

36. The diseases that poultry farmers are most concerned with are fowlpox, pullorium, coccidiosis, worms, and lice.

37. The part-time farmers reported having more difficulty with farm management problems than full-time farmers.

38. Eighty per cent of both the full-time and the part-time farmers reported no problems in home food supply.

39. The full-time farmers indicated they understood the programs of governmental agencies, part-time farmers indicated they did not understand the programs.

MAJOR DIFFERENCES IDENTIFIED BETWEEN FULL-TIME AND PART-TIME FARMERS IN THIS STUDY

I. Size of Farm Business

1. Total Acres Per Farm

A. Full-time farmers reported average size farm between 321-640 acres.

B. Part-time farmers reported average size farm between 80-160 acres.

2. Total Capital Investments in Land

A. Full-time farmers average $42,500 per farm.

B. Part-time farmers averaged $9,500 per farm.

3. Total Capital Investments in Improvements

A. Full-time farmers averaged $20,000 per farm.

B. Part-time farmers averaged $9,800 per farm.

4. Total Capital Invested in Livestock

A. Full-time farmers averaged $30,000 per farm.

B. Part-time farmers averaged $9,200 per farm.

5. Total Number of Beef Cattle

A. Full-time farmers averaged 141 head per farm.

B. Part-time farmers averaged 46 head per farm.

II. Rates of Production

1. Calf Crop Raised

A. Full-time farmers averaged 83 per cent calf crop per farm.

B. Part-time farmers averaged 75 per cent calf crop per farm.

2. Age Calves are Marketed

A. Full-time farmers average market age of calves is 8 months per farm.

B. Part-time farmers average market age of calves is 9 months per farm.

3. Market Weight of Calves

A. Full-time farmers averaged 575 pounds per calf per farm.

B. Part-time farmers averaged 525 pounds per calf per farm.

4. Age Heifers are Bred

A. Full-time farmers average age for breeding is 18 months per farm.

B. Part-time farmers average age for breeding is 20 months per farm.

Conclusions and Recommendations

An evaluation of the results of this study indicates that the farmers surveyed in the Panama School District area are interested in attending adult farm meetings.

The farmers are interested in gaining new knowledge, developing needed skills, and adopting approved practices that will improve their abilities in farming.

Meetings should be carefully planned with a selected group of farmers so that the needs and interests of the group will be maintained.

Meetings should be planned around problems or practices that will affect the farmers. Meetings should be organized to be both seasonably and timely.

The meetings should be planned so that the farmers will receive practical information which they can use. The farmers should be given an opportunity to relate their experiences.

Resource personnel, films, charts, and field trips can be used to a great advantage in teaching adult farmers.

The writer suggests that a program of adult education continue in the Panama area. The program should be planned in such a way to help solve the problems of the farmers and ranchers in this area.

Beef cattle production is by far the most important enterprise in the community, but in planning a long range program, dairy, swine, and poultry producers of the community must be included.

At the present time the author is making plans to discuss further problems of the livestock producers with emphasis on the improvement of pastures.

The cost of land in this area has tripled in the past five years. With this cost increase farmers cannot buy additional land to expand cattle businesses; therefore, they must improve the land now in their possession. In some areas of the school district it takes approximately 60 acres for an animal unit. With a pasture improvement program this can be improved by brush control, planting recommended varieties of grasses, fertilizing the land according to soil test recommendations, and controlling weeds in pastures.

The survey revealed a need for adult classes to be held in the area of animal enterprises, pasture management, livestock disease problems,

external and internal parasite control, and farm management problems.

The writer is of the opinion that a well-planned program in agriculture for adult farmers is a must for a chapter of vocational agriculture to serve a community in the manner it should be served.

A SUGGESTED YEARLY PROGRAM OF INSTRUCTION FOR THE FARMERS OF THE PANAMA SCHOOL AREA

The following program was evolved from data obtained through this study. The topics selected for the adult farmer meetings were taken from study data.

Date	Tentative Topic for Meeting
1962	
September	Parasite Control
October	Livestock Marketing
November	Disease Control
December	Tractor Maintenance Factors Affecting Farm Business Efficiency
1963	
January	Calving and Feeding Problems Interest Rates
February	Tractor Maintenance
March	Pasture Improvement
April	Brush Control
May	Market Study
June	Pasture Tour
July	Summer Pasture
August	Fall and Winter Pasture

Date	Tentative Topic for Meeting
September	Planning Winter Pastures
October	Marketing Outlook for Cattle
November	Determining Market Classes and Grades of Cattle
December	Beef Cattle Management
1964	
January	Financing a Farm Keeping Farm Records Income Tax
February	Beef Cattle Management
March	Castration, Vaccination, and Dehorning
April	Pasture Improvement Farm Business and Labor Income
May	Pasture Tour
June	Summer Pastures
July	Selecting and Buying Forages
August	Planning for Fall and Winter Pasture
September	Marketing Livestock
October	Controlling Diseases and Parasites
November	Winter Feeding of Livestock
December	Beef Cattle Management Economic Conditions, and Animal Production

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APPENDIX

A LIST OF THE FARMERS SURVEYED IN THIS REPORT

Full-time	Part-time
1. W. C. Box	1. Dennis Anderson
2. Ted Brown	2. Pete Anderson
3. Allen Copeland	3. Lucian Braddy
4. Jack Daniels	4. Jack Kinsey
5. James Hickman	5. Norman Lawson
6. Horace Hill	6. Dave Monks
7. Daton Hoffman	7. J. D. Ollie
8. H. L. Lowrimore	8. Arthur Richards
9. J. L. Lowrimore	9. Raymond Rust
10. John N. Mixon	10. Edith Speck
11. Watt Phillips	11. Cleve Sockey
12. L. D. Prock	12. W. K. Taylor
13. Leon Watson	13. Woodrow Toney
14. Marvin Watson	14. Joe Terry
15. Joe Wilson	15. Calvin Wiles

QUESTIONNAIRE FOR OBTAINING INFORMATION
REGARDING THE THIRTY FARMERS
IN THIS REPORT

I. 1. Name_____ Age_____ Marital Status_____

2. Number of Children_____ Highest grade completed in school _____

3. Size of Farm_____ Acres Owned_____ Rented_____ Partnership_____

4. Years of Farming Experience _____ Years on This Farm_____

5. What is Future Plan? Expand Operation_____ Discontinue_____

6. Do you work at another job in addition to farming?_____

7. How many days per year?_____ Occupation_____ Where?_____

8. What per cent of your total yearly income do you earn off the farm?_____

9. Estimate amount you have invested in the farming business such as: Land_____ Improvements_____ Livestock_____

10. Name of the farm organizations to which you belong_____

_____

11. Would you be interested in attending regular organized farmer meetings at the vocational agriculture building?_____

12. If answer is yes, what time of day would you prefer to meet? _____ Day of the week?_____

II. Kinds of Livestock Owned During Past Year:

1. Beef Cattle: Number over 2 years old_____ Under 2 years old _____

2. Dairy Cattle: Number over 2 years old_____ Under 2 years old_____

3. Swine: Over six months_____ Pigs_____

4. Horses: Over 2 years old_____ Under 2 years old_____

5. Poultry: Laying Hens_____ Broilers_____

Turkeys_____ Poults_____

III. Farm Mechanics:

Kind of Equipment:

1. Number of tractors_____ Hay Baler_____ Mowers_____

Rake_____ Brush-hogs_____ Power Sprayers_____

Fertilizers_____ Disk_____ Other_____

2. Would you be interested in a farm Machinery and Repair Course?

_____

3. Do you now have a farm shop on the home farm?_____

IV. Kinds of Pastures During Past Year:

1. Circle each of the kind of plants used in your pastures:

Big Bluestem, Little Bluestem, Indian, Switch, Fescue,

Bermuda Grass, Mixed Clovers, and Others.

2. Native grass pastures, Acres_____. Carrying Capacity____

3. Woodland Pastures, Acres_____. Carrying Capacity_____

4. Tame Pastures, Acres_____. Carrying Capacity_____

5. Legume, grass mixtures, Acres_____. Carrying Capacity____

6. Temporary Pastures, Acres_____. Carrying Capacity_____

7. Which Bermuda grass to you prefer: Common_____ NK-37_____

Midland____ Greenfield___

V. Pasture Management:

1. Check the following grazing practices used on the farm.

A. Continuous_____ B. Rotation_____

2. What plants do you use for winter pastures?_____

3. What method do you use to control wood in pastures?_____

4. How do you control your brush?_____

5. Do you practice burning off your pastures?_____

6. Do you overgraze your pasture?_____

7. Are you interested in pasture improvement?_____

8. Do you have your soils tested?____ Pastures fertilized the past year_____ Across_____ Pounds_____ Kind_____

LIVESTOCK SURVEY

I. Livestock and Poultry Production Problems:

1. Cows: Breed_____ No. Purebred_____ No. Grade_____

2. Bulls: Breed_____ No. Purebred_____ No. Grade_____

3. Heifers: Age bred_____ Months cows calve_____

4. Per cent calf crop raised_____

5. Breeding Program:

   Artificial breeding_____ Control breeding_____

   Bulls run with cows year round_____

6. Age calves are dehorned_____ Method_____

7. Age calves are castrated_____ Method_____

8. Method used to control parasites: Lice_____ Flies_____

   Grubs_____ Ticks_____

9. Age calves are vaccinated: Blackleg_____ Bangs_____

10. Name months of year cattle are marketed_____

11. Where are cattle marketed: Wister_____ Fort Smith_____

12. Age calves are marketed_____ Weight_____

13. Swine:

   A. Breed_____ Registered_____ Grade_____

   B. Average number in litter_____.

   C. Average number raised per litter_____.

   D. Do you sell pigs at weaning_____. Feed out for market_____.

14. Poultry:

   A. Breed_____ Age Marketed_____ Average Weight___

   B. Average eggs produced per hen_____

   C. Grade on eggs_____. Where Marketed_____

II. Cattle Disease (Check problem you have):

1. Blackleg_____ 7. Anaplasmosis_____
2. Bangs_____ 8. Pinkeye_____
3. Foot Rot_____ 9. Pneumonia_____
4. Shipping Fever_____ 10. Scours_____
5. Milk Fever_____ 11. Parasites_____
6. Mastitis_____ 12. Others_____

III. Swine Disease and Parasites (Check problem you have):

1. Cholera_____ 4. Mange_____
2. Erysipelas_____ 5. Lice_____
3. Pneumonia_____ 6. Worms_____

IV. Poultry Disease and Parasites (Check problem you have):

1. New castle_____ 4. Cocciciosis_____
2. Fowlpox_____ 5. Worms_____
3. Pullorium_____ 6. Lice_____

V. Farm Management (Check problem you have):

1. Financing a farm program_____.
2. Sources of credit_____ Interest rates_____
3. Figuring State and Federal Income Tax_____
4. Keeping accurate farm records_____
5. Leasing and rental agreements_____
6. Social Security Problems_____
7. Insurance: Life_____ Hospitalization_____ Property_____

VI. Home Food Supply (Check problem you have):

1. Small fruits_____.
2. Vegetables_____.
3. Food Preservation: Canned_____ Frozen_____

4. Butchering Livestock_____

VII. Governmental Agencies (Check problem you have):

Do you understand the following problems?

1. SCS_____

2. ASCS_____

3. REA_____

4. FHA_____

VITA

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Candidate for the Degree of

Master of Science

Thesis: DEVELOPING AN EDUCATIONAL PROGRAM IN VOCATIONAL AGRICULTURE FOR PART-TIME AND FULL-TIME FARMERS IN THE PANAMA SCHOOL AREA

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Experience: Served in the United States Merchant Marines in 1944-1946; entered the United States Air Force in 1951 and was honorably discharged in 1953; taught Vocational Agriculture at Panama, Oklahoma, from 1956 until present time.

Professional and Civic Organizations: Member of the LeFlore County Teachers' Association; Oklahoma Educational Association; Oklahoma Vocational Agriculture Teachers' Association; National Vocational Teachers' Association; Panama, Oklahoma, Lions Club.